

PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

To:

CARDUS, Alan, Peter
Marconi Intellectual Property
Marrable House
The Vineyards, Great Baddow
Chelmsford
Essex CM2 7QS
United Kingdom

NOTIFICATION OF RECEIPT OF
RECORD COPY

(PCT Rule 24.2(a))

Date of mailing (day/month/year)
29 August 2003 (29.08.03)

IMPORTANT NOTIFICATION

Applicant's or agent's file reference
P/63074/GPTU11

International application No.
PCT/GB03/03220

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

MARCONI UK INTELLECTUAL PROPERTY LTD (for all designated States except US)
HUNNEYBALL, Timothy, John (for US)

International filing date : 28 July 2003 (28.07.03)
Priority date(s) claimed : 26 July 2002 (26.07.02)
Date of receipt of the record copy
by the International Bureau : 14 August 2003 (14.08.03)
List of designated Offices :

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW
EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
EP : AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR
OA : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
National : AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ,
EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- ☒ time limits for entry into the national phase - see updated important information (as of April 2002)
☐ confirmation of precautionary designations (if applicable)
☐ requirements regarding priority documents (if applicable)

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer: .

Maurice COVINO

Facsimile No. (41-22) 338.87.40

Telephone No. (41-22) 338 8455

INFORMATION ON TIME LIMITS FOR ENTERING THE NATIONAL PHASE

The applicant is reminded that the **"national phase"** must be entered before each of the designated Offices indicated on the cover sheet of this Notification by paying national fees and furnishing translations, as prescribed by Articles 22 and 39 and the applicable national laws. In addition, the applicant may also have to comply with other special requirements applicable in certain Offices. It is the applicant's responsibility to ensure the necessary steps to enter the national phase are taken in a timely fashion. Most Offices do not issue reminders to applicants in connection with the entry into the national phase.

The applicable time limit for entering the national phase will, subject to what is said in the following paragraph, be **30 MONTHS** from the priority date, not only in respect of any elected Office where a demand for international preliminary examination is filed before the expiration of 19 months from the priority date (see Article 39(1)), but also in respect of any designated Office, in the absence of filing of such demand, where Article 22(1) as modified with effect from 1 April 2002 applies in respect of that designated Office. For further details, see PCT Gazette No. 44/2001 of 1 November 2001, pages 19926, 19932 and 19934, as well as the PCT Newsletter, October and November 2001 and February 2002 issues.

In practice, time limits other than the 30-month time limit will continue to apply, for various periods of time, in respect of certain designated or elected Offices. For regular updates on the applicable time limits (20, 21, 30 or 31 months, or other time limit), Office by Office, refer to the PCT Gazette ("Section IV" part published on a weekly basis), to the PCT Newsletter (on a monthly basis) and to the relevant National Chapters in Volume II of the PCT Applicant's Guide (the paper version of which is updated usually twice a year and the Internet version of which is updated usually on a weekly basis). Finally, a cumulative table of all applicable time limits for entering the national phase is available from WIPO's Internet site, via links from various pages the site including those of the Gazette, Newsletter and Guide, at <http://www.wipo.int/pct/en/index.html>.

Information about the requirements for filing a demand for international preliminary examination is set out in the PCT Applicant's Guide, Volume I/A, Chapter IX. Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination (at present, all PCT Contracting States are bound by Chapter II).

CONFIRMATION OF PRECAUTIONARY DESIGNATIONS

This notification lists only specific designations made under Rule 4.9(a) in the request. It is important to check that these designations are correct. Errors in designations can be corrected where precautionary designations have been made under Rule 4.9(b). The applicant is hereby reminded that any precautionary designations may be confirmed according to Rule 4.9(c) before the expiration of 15 months from the priority date (this time limit may not be extended). If it is not confirmed, it will automatically be regarded as withdrawn by the applicant. There will be no reminder and no invitation. Confirmation of a designation consists of the filing of a notice specifying the designated State concerned (with indication of the kind of protection or treatment desired) and the payment of the designation and confirmation fees. The Notice of confirmation and payment must reach the receiving Office within the 15-month time limit.

REQUIREMENTS REGARDING PRIORITY DOCUMENTS

For applicants who have not yet complied with the requirements regarding priority documents, the following is recalled.

Where the priority of an earlier national, regional or international application is claimed, the applicant must submit a copy of the said earlier application, certified by the authority with which it was filed ("the priority document") to the receiving Office (which will transmit it to the International Bureau) or directly to the International Bureau, before the expiration of 16 months from the priority date, provided that any such priority document may still be submitted to the International Bureau before that date of international publication of the international application, in which case that document will be considered to have been received by the International Bureau on the last day of the 16-month time limit (Rule 17.1(a)).

Where the priority document is issued by the receiving Office, the applicant may, instead of submitting the priority document, request the receiving Office to prepare and transmit the priority document to the International Bureau. Such request must be made before the expiration of the 16-month time limit and may be subjected by the receiving Office to the payment of a fee (Rule 17.1(b)).

If the priority document concerned is not submitted to the International Bureau or if the request to the receiving Office to prepare and transmit the priority document has not been made (and the corresponding fee, if any, paid) within the applicable time limit indicated under the preceding paragraphs, any designated State may disregard the priority claim, provided that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within the time limit which is reasonable under the circumstances.

Where several priorities are claimed, the priority date to be considered for the purposes of computing the 16-month time limit is the filing date of the earliest application whose priority is claimed.

PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

CARDUS, Alan, Peter
Marconi Intellectual Property
Marrable House
The Vineyards, Great Baddow
Chelmsford
Essex CM2 7QS
United Kingdom

| | |
|--|---|
| Date of mailing (day/month/year) 29 August 2003 (29.08.03) | IMPORTANT NOTIFICATION |
| Applicant's or agent's file reference P/63074/GPTU11 | |
| International application No. PCT/GB03/03220 | International filing date (day/month/year) 28 July 2003 (28.07.03) |
| International publication date (day/month/year) Not yet published | Priority date (day/month/year) 26 July 2002 (26.07.02) |
| Applicant MARCONI UK INTELLECTUAL PROPERTY LTD et al | |

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

| <u>Priority date</u> | <u>Priority application No.</u> | <u>Country or regional Office or PCT receiving Office</u> | <u>Date of receipt of priority document</u> |
|-------------------------|---------------------------------|---|---|
| 26 July 2002 (26.07.02) | 0217355.7 | GB | 21 Augu 2003 (21.08.03) |

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|--|--|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 338.87.40 | Authorized officer Maurice COVINO Telephone No. (41-22) 338 8455 |
|--|--|

PCT

NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

CARDUS, Alan, Peter
Marconi Intellectual Property
Marrable House
The Vineyards, Great Baddow
Chelmsford
Essex CM2 7QS
ROYAUME-UNI

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| CHELMSFORD | |
| APC | APC |
| 23 FEB 2004 | |
| APC | APC |

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|---|---|---|
| Date of mailing (day/month/year) 05 February 2004 (05.02.2004) | | |
| Applicant's or agent's file reference P/63074/GPTU11 | | |
| IMPORTANT NOTICE | | |
| International application No. PCT/GB2003/003220 | International filing date (day/month/year) 28 July 2003 (28.07.2003) | Priority date (day/month/year) 26 July 2002 (26.07.2002) |
| Applicant MARCONI UK INTELLECTUAL PROPERTY LTD et al | | |

1. Notice is hereby given that the International Bureau has **communicated**, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this notice:

AU, AZ, BY, CH, CN, CO, DE, DZ, EP, HU, JP, KG, KP, KR, MD, MK, MZ, RU, TM, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AE, AG, AL, AM, AP, AT, BA, BB, BG, BR, BZ, CA, CR, CU, CZ, DK, DM, EA, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, KE, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MG, MN, MW, MX, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SY, TJ, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this notice is a copy of the international application as published by the International Bureau on 05 February 2004 (05.02.2004) under No. WO 2004/012414

4. **TIME LIMITS for filing a demand for international preliminary examination and for entry into the national phase**

The applicable time limit for entering the national phase will, **subject to what is said in the following paragraph**, be **30 MONTHS** from the priority date, not only in respect of any elected Office if a demand for international preliminary examination is filed before the expiration of **19 months** from the priority date, but also in respect of any designated Office, in the absence of filing of such demand, where Article 22(1) as modified with effect from 1 April 2002 applies in respect of that designated Office. For further details, see *PCT Gazette* No. 44/2001 of 1 November 2001, pages 19926, 19932 and 19934, as well as the *PCT Newsletter*, October and November 2001 and February 2002 issues.

In practice, **time limits other than the 30-month time limit** will continue to apply, for various periods of time, in respect of certain designated or elected Offices. For **regular updates on the applicable time limits** (20, 21, 30 or 31 months, or other time limit), Office by Office, refer to the *PCT Gazette*, the *PCT Newsletter* and the *PCT Applicant's Guide*, Volume II, National Chapters, all available from WIPO's Internet site, at <http://www.wipo.int/pct/en/index.html>.

For filing a **demand for international preliminary examination**, see the *PCT Applicant's Guide*, Volume I/A, Chapter IX. Only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination (at present, all PCT Contracting States are bound by Chapter II).

It is the applicant's **sole responsibility** to monitor all these time limits.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Gijsbertus Beijer - Carlos Roy

Facsimile No.(41-22) 740.14.35

Telephone No.(41-22) 338.91.11

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| CHEM 3RD | RD |
| 06 APR 2004 | |
| APC | |

PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

To:

CARDUS, Alan, Peter
Marconi Intellectual Property
Crompton Close
Basildon
Essex SS14 3BA
United Kingdom

INFORMATION CONCERNING ELECTED
OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

| | | | |
|--|---|---|--|
| Date of mailing (day/month/year) 26 March 2004 (26.03.2004) | | IMPORTANT INFORMATION | |
| Applicant's or agent's file reference P/63074/GPTU11 | | | |
| International application No. PCT/GB2003/003220 | International filing date (day/month/year) 28 July 2003 (28.07.2003) | Priority date (day/month/year) 26 July 2002 (26.07.2002) | |
| Applicant MARCONI UK INTELLECTUAL PROPERTY LTD et al | | | |

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

EP : AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR
National : BG, CA, CN, DE, GB, IL, JP, KP, KR, MN, NO, PL, RO, RU, SK, US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW
EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
OA : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
National : AE, AG, AL, AM, AT, AU, AZ, BA, BB, BR, BY, BZ, CH, CO, CR, CU, CZ, DK, DM, DZ, EC,
EE, ES, FI, GD, GE, GH, GM, HR, HU, ID, IN, IS, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MW, MX, MZ, NI, NZ, OM, PG, PH, PT, SC, SD, SE, SG, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, UZ, VC, VN, YU, ZA, ZM, ZW

3. The applicant is reminded that he must enter the "national phase" before the expiration of 30 months from the priority date before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

The entry into the European regional phase is postponed until 31 months from the priority date for all States designated for the purposes of obtaining a European patent.

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| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland | Authorized officer: Jean-Luc MARTIN |
| Facsimile No. (41-22) 338.87.40 | Telephone No. (41-22) 338 9887 |

Rec'd PCT/PTO 25 JAN 2005
PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Cardus, Alan Peter
MARCONI INTELLECTUAL PROPERTY
Crompton Close
Basildon
Essex SS14 3BA
GRANDE BRETAGNE

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| CHELMSFORD | |
| 14 MAY 2004 | 14 MAY 2004 |
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PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing
(day/month/year)

12.05.2004

Applicant's or agent's file reference
P/63074/GPTU11

REPLY DUE

within 3 month(s)
from the above date of mailing

International application No.
PCT/GB 03/03220

International filing date (day/month/year)
28.07.2003

Priority date (day/month/year)
26.07.2002

International Patent Classification (IPC) or both national classification and IPC
H04L29/06, H04L29/06

Applicant
MARCONI UK INTELLECTUAL PROPERTY LTD et al

- This written opinion is the **first** drawn up by this International Preliminary Examining Authority.
- This opinion contains indications relating to the following items:
 - ☒ Basis of the opinion
 - ☐ Priority
 - ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Lack of unity of invention
 - ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Certain documents cited
 - ☐ Certain defects in the international application
 - ☐ Certain observations on the international application
- The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
- The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 26.11.2004

Name and mailing address of the international preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Lebas, Y

Formalities officer (incl. extension of time limits)

Exner, K

Telephone No. +49 89 2399-7826



1. Basis of the opinion

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, Pages

1-13 as originally filed

Claims, Numbers

1-20 as originally filed

Drawings, Sheets

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

| | | |
|-------------------------------|--------|-------|
| Novelty (N) | Claims | 1, 16 |
| Inventive step (IS) | Claims | 1-20 |
| Industrial applicability (IA) | Claims | |

2. Citations and explanations**see separate sheet**

Cited Documents:

- D1: EP-A-1 035 708 (IBM) 13 September 2000 (2000-09-13)
D2: MALKIN G: "RFC 2454: RIP Version 2" IETF RFC 2454, November 1998 (1998-11), XP002216843 Retrieved from the Internet:
URL: <http://www.faqs.org/ftp/rfc/pdf/rfc2453.txt.pdf> [retrieved on 2002-10-15]

From the available prior art, the subject matter of D1 is considered to represent the closest to that of the present application.

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- 1a. The subject-matter of independent claim 1 is not novel (Art 33(2) PCT). All the technical features of claim 1 are indeed already disclosed in D1:

a communication system comprising a first network for the communication of data according to a first protocol (Intranet 602 in Figure 6) and a second network for the communication according to a second protocol (Internet 604 in Figure 6); in which each network comprises at least one node (Web-browser 601 and Web-server 605), in which the system also comprises a plurality of communication interfaces for providing communication between a first node of the first network and a second node of the second network (firewalls 603);

in which each interface comprises means for sending values to the first node for indicating the availability of communication between that interface and the second node (answer to probes sent from client system 302, see column 11, lines 12-13 and 32-43);

in which the system comprises selection means for selecting one of the interfaces for communicating data between the first node and the second node based on the values sent by the interfaces to the first node (selection of the "best" proxy server is done at the client, if the client itself is the autoproxy URL system, see column 11, lines 44-46).

FIG. 2
p. a.

- 1b. If novelty should be disputed based on some minor difference of interpretation, it is pointed out that the subject-matter of claim 1 would in any case not involve an

inventive step (Article 33(3) PCT) having regard to the disclosure of D1, especially as this document discloses the same object and the same type of solution as the present application.

- 1c. The subject-matter of claim 1 in further not inventive over the subject-matter of D2: in the RIP routing protocol disclosed in D2, routers advertise their routing tables to each other, which comprises sending a metric giving the "availability" of the communication between the router and each node of the network (see D2, pages 7 and 8).

According to the RIP protocol, a first node wanting to communicate data to a second node, will send it to the router which advertised the shortest distance to the second node. If the available routers are furthermore interfaces between different networks (for example transport level gateway), the same configuration as in claim 1 is obtained, which therefore can not be considered as inventive (Article 33(3) PCT)

2. In method claim 16, the step of "providing a plurality of communication interfaces" renders the claim unclear (Art. 84 EPC).

Indeed, a method step should always define the function of a means, and not be used to introduce new parts of the system. Moreover, the formulation "providing" only means supplying somebody with something and cannot be considered as a technical feature but as a human activity.

The "providing" step should therefore be removed and the various means necessary for carrying out the method be introduced in the preamble of the claims by a formulation which is clearly different from the one of a method step, using for example: "method for use in a system comprising..., the method being characterised by the following steps...".

3. Independent claim 16 is a claim for a method corresponding to the system of claim 1.

The arguments set out for the subject-matter of claim 1 (see points 1a-1c) also apply to the subject-matter of claim 16.

Therefore, as for claim 1, the subject-matter of independent claim 16 is not novel (Articles 33(1) and 33(2) PCT), or at least does not involve an inventive step

(Article 33(3) PCT).

4. The additional features of dependent claims 2-15 and 17-20 add nothing of inventive significance to claims 1 and 16, being either features rendered obvious by document D1, or features readily apparent to a skilled person based on his common general knowledge of the art (Article 33(1)-(3) PCT).

Formal deficiencies in the international application:

1. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
2. The independent claims are not in the two-part form required by Rule 6.3(b) PCT, with a preamble based on D1.

If the Applicant is of the opinion that the two-part form is not appropriate he is invited to provide reasons in his reply.

3. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.
4. The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT.
5. The description should be adapted to any new claim (Rule 5.1(a)(iii) PCT).
6. The phrase "incorporated herein by reference" on page 2, lines 10-11 should be deleted as the application should be self-contained; such referenced documents are not regarded as part of the disclosure unless they contain matter essential to the invention, in which case the subject-matter in question would have to be incorporated into the description. This however is not the case here (see PCT Guidelines II-4.17).
7. The first page of the description comprises internal information which are apparently only relevant to the applicant and should therefore be removed from

the dossier. This page is furthermore not numbered, which contravenes Rule 11.7 PCT.

8. In order to facilitate the examination of the conformity of the amended application with the requirements of Article 34 (2) b) PCT, the Applicant is requested to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based.
9. The Applicant is requested to file amendments by way of replacement pages. He should also take into account the requirements of Rule 66.8 PCT. In particular, fair copies of the amendments should preferably be filed in triplicate.

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

Cardus, Alan Peter
MARCONI INTELLECTUAL PROPERTY
Crompton Close
Basildon
Essex SS14 3BA
GRANDE BRETAGNE

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

26.10.2004

Applicant's or agent's file reference
P/63074/GPTU11

IMPORTANT NOTIFICATION

International application No.
PCT/GB 03/03220

International filing date (day/month/year)
28.07.2003

Priority date (day/month/year)
26.07.2002

Applicant
MARCONI UK INTELLECTUAL PROPERTY LTD et al

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the International preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Barrio Baranano, A

Tel. +49 89 2399-8621



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference P/63074/GPTU11 | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416) | |
| International application No. PCT/GB 03/03220 | International filing date (<i>day/month/year</i>) 28.07.2003 | Priority date (<i>day/month/year</i>) 26.07.2002 |
| International Patent Classification (IPC) or both national classification and IPC H04L29/06 | | |
| Applicant MARCONI UK INTELLECTUAL PROPERTY LTD et al | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

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|---|---|
| Date of submission of the demand 10.02.2004 | Date of completion of this report 26.10.2004 |
| Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div> | Authorized Officer Lebas, Y Telephone No. +49 89 2399-8980 |

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/03220

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-3, 7-13 as originally filed
4-6 filed with telefax on 03.08.2004

Claims, Numbers

1-16 filed with telefax on 03.08.2004

Drawings, Sheets

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | 1-16 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | 1-16 |
| | No: Claims | |
| Industrial applicability (IA) | Yes: Claims | 1-16 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/03220

Cited Documents:

- D1: EP-A-1 035 708 (IBM) 13 September 2000 (2000-09-13)
D2: MALKIN G: "RFC 2454: RIP Version 2" IETF RFC 2454, November 1998 (1998-11), XP002216843 Retrieved from the Internet:
URL: http://www.faqs.org/ftp/rfc/pdf/rfc245_3.txt.pdf [retrieved on 2002-10-15]
D3: US 2001/055285 A1 (TOMOIKE HIROYUKI) 27 December 2001 (2001-12-27)
D4: CIUREJ R F ET AL: "IP ROUTER FAULT TOLERANCE IN THE IDEN PACKET DATA SYSTEM" MOTOROLA TECHNICAL DEVELOPMENTS, MOTOROLA INC. SCHAUMBURG, ILLINOIS, US, vol. 32, 1 September 1997 (1997-09-01), pages 145-150, XP000741165 ISSN: 0887-5286

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The syntax of independent claims 1 and 16 render their subject-matter unclear (Article 6 PCT). The features originating from the originally filed dependent claims 2 and 3 (for claim 1) and 17 and 18 (for claim 14) seem to have been added to the original independent claims without taking into consideration any syntactical rule. The repetition of the independent claims in the description on pages 4 and 5 also misses syntactical logic.
2. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document):

a communication system comprising a first network for the communication of data according to a first protocol (Intranet 602 in Figure 6) and a second network for the communication according to a second protocol (Internet 604 in Figure 6); in which each network comprises at least one node (Web-browser 601 and Web-server 605), in which the system also comprises a plurality of communication interfaces for providing communication between a first node of the first network and a second node of the second network (firewalls 603);

in which each interface comprises means for sending values to the first node for indicating the availability of communication between that interface and the second node (answer to probes sent from client system 302, see column 11, lines 12-13 and 32-43);

in which the system comprises selection means for selecting one of the interfaces

for communicating data between the first node and the second node based on the values sent by the interfaces to the first node (selection of the "best" proxy server is done at the client, if the client itself is the autoproxy URL system, see column 11, lines 44-46).

The subject-matter of claim 1 differs mainly from this known system in that: each interface comprises means for detecting the selection of one of the plurality of interfaces and means for **modifying**, on selection of the selected interface, **the value sent to the first node**; and the selection means comprises means for **preferentially selecting an interface associated with the modified value**.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as guarantying the stability of the selection of the chosen interface, even if other interfaces advertise the same value, and would therefore be also eligible for selection. The system of claim 1 allows to "lock" the selection on the selected interface. It permits to avoid that packets be routed over a second interface, packets which would not be recognized in the case of a connection-oriented communication between the two nodes in the different networks.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

- there is no mention in D1 of modifying the system of D1 in order to "lock" the selection on the selected interface.
- in D2, the Routing Information Protocol (RIP) Version 2 is disclosed, which misses any consideration about "locking" the connection on a selected router.
- in D3 and D4 there is no mention either of the problem and/or of the solution provided by the application.

3. Claims 2-13 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step (Articles 32(2) and (3) PCT).
4. In independent method claim 14, the step of "providing a plurality of communication interfaces" renders the claim unclear (Article 6 PCT). Indeed, a method step should always define the function of a means, and not be used to introduce new parts of the system. Moreover, the formulation "providing"

only means supplying somebody with something and cannot be considered as a technical feature but as a human activity.

The "providing" step should therefore be removed and the various means necessary for carrying out the method be introduced in the preamble of the claims by a formulation which is clearly different from the one of a method step, using for example: "method for use in a system comprising..., the method being characterised by the following steps...".

5. Independent claim 14 is a representation of system claim 1 in terms of method steps.
Consequently, the subject-matter of independent claim 14 also meets the requirements of the PCT with respect to novelty and inventive step (Art. 32(2) and (3) PCT).
6. Claims 15-16 are dependent on claim 14 and as such also meet the requirements of the PCT with respect to novelty and inventive step (Art. 32(2) and (3) PCT).

Formal deficiencies in the international application:

- a. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
- b. The independent claims are not in the two-part form required by Rule 6.3(b) PCT, with a preamble based on D1.
- c. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.
- d. The phrase "incorporated herein by reference" on page 2, lines 10-11 should be deleted as the application should be self-contained; such referenced documents are not regarded as part of the disclosure unless they contain matter essential to the invention, in which case the subject-matter in question would have to be incorporated into the description. This however is not the case here (see PCT Guidelines II-4.17).
- e. The first page of the description comprises internal information which are apparently only relevant to the applicant and should therefore be removed from the dossier. This page is furthermore not numbered, which contravenes Rule 11.7

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B. If we imagine a situation where two paths exist between the two parties (party A and party B) that wish to converse, each path may pass via a different one of the bridges.

If party A calls party B and the call is established via bridge 1, two connections are used: one
5 between party A and bridge 1 and one between bridge 1 and party B. Bridge 1 and bridge 2
both have routes to party B and although party A has established a connection with bridge 1, as
mentioned earlier, each packet has complete addressing information and there is the possibility
that some packets could be routed to bridge 2. As no connection exists with bridge 2 these
packets will get discarded, interrupting the conversation. As a result, the connection with
10 bridge 1 may also clear down (timeout).

The present invention provides a communications system comprising a first network for the
communication of data according to a first protocol and a second network for the
communication of data according to a second protocol; in which each network comprises at
15 least one node, in which the system also comprises a plurality of communication interfaces for
providing communication between a first node of the first network and a second node of the
second network; in which each interface comprises means for sending values to the first node
for indicating the availability of communication between that interface and the second node; in
which the system comprises selection means for selecting one of the interfaces for
20 communicating data between the first node and the second node based on the values sent by the
interfaces to the first node in which each interface comprises means for detecting the selection
of one of the plurality of interfaces and means for modifying, on selection of the selected
interface, the value sent to the first node in which the selection means comprises means for
preferentially selecting an interface associated with the modified value.

The present invention also provides a method for the communication of data between a first node in a first network and a second node in a second network, in which data is communicated
5 in the first network according to a first protocol and data is communicated in the second network according to a second protocol; in which the method includes the step of providing a plurality of communication interfaces for providing communication between the first node and the second node; in which the method also includes the step of sending values from each interface to the first node indicating the availability of communication between that interface
10 and the second node; in which the method also includes the step of selecting one of the interfaces for communicating data between the first and second nodes, in which the selection is based on the values sent by the interfaces to the first node including the steps of detecting the selection of the selected interface and modifying, the value sent by the selected interface to the first node including the step of preferentially selecting the interface sending the modified value.

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Embodiments of the invention will now be described, by way of example only, with reference to the drawings, in which:

Figure 1 shows a conventional communications system using TSBs;

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Figures 2 and 3 show the protocol layers of the system of Figure 1;

Figure 4 shows a representation of information flow in a TSB according to an embodiment of the present invention;

Figures 5 to 10 show operation of two TSBs according to further embodiments of the present invention.

Figure 1 shows a TCP/IP network connected to an OSI network via a number of TSBs connected in parallel (only two TSBs are shown for simplicity). Each of the two networks will typically have a large number of attached terminals, one being shown per network for the purposes of illustration. For the purposes of the present description, the terminal connected to the TCP/IP network is designated "source" and the terminal connected to the OSI network is designated "destination".

10 Figure 1 shows a conventional arrangement in which two parallel TSBs are used to provide communication between different networks: in this example between a first network operating under the TCP/IP protocol and a second network operating under the OSI protocol. In order to provide this communication, the TSBs act to interface between the lower layers of the two protocols and to transfer the upper layers of a first protocol (e.g. OSI) from the "non-native" lower layers of a second protocol (e.g. TCP/IP) to the "native" lower layers of its own, first protocol. If we look at the end-to-end path, a common set of upper, OSI layers is carried across a region of "non-native" lower layers. The corresponding protocol layers are shown in Figure 2.

20 Figure 2 illustrates the structure of the protocol layers at the source and destination terminals of Figure 1 and in addition the two sets (or "stacks") of protocol layers of one of the TSBs linking the two networks. Figure 2 illustrates the source terminal, operating in the TCP/IP network that supports a protocol including a number of upper layers, not shown in detail, of OSI protocol. A layer according to RFC 1006 provides accommodation between the upper, OSI,

CLAIMS

1. A communications system comprising a first network for the communication of data according to a first protocol and a second network for the communication of data according to a second protocol; in which each network comprises at least one node, in which the system also comprises a plurality of communication interfaces for providing communication between a first node of the first network and a second node of the second network;

in which each interface comprises means for sending values to the first node for indicating the availability of communication between that interface and the second node;

in which the system comprises selection means for selecting one of the interfaces for communicating data between the first node and the second node based on the values sent by the interfaces to the first node in which each interface comprises means for detecting the selection of one of the plurality of interfaces and means for modifying, on selection of the selected interface, the value sent to the first node in which the selection means comprises means for preferentially selecting an interface associated with the modified value.

2. The communications system of claim 1 in which each interface comprises means for detecting an error condition and means for preventing the sending of values by that interface on detection of an error condition.

3. The communications system of any above claim in which each interface has means for sending the values as part of a message comprising an address representing the second node.
4. The communications system of claim 3 in which the address comprised in the message representing the same second node sent from each interface is the same.
5. The communications system of claim 3 or 4 in which the address is an IP address in which the IP address maps onto a NSAP address associated with the second network.
6. The communications system of claim 3 or 4 in which the address is an NSAP address in which the NSAP address maps onto an IP address associated with the second network.
7. The communications system of any above claim in which the protocol of the first network is TCP/IP and the protocol of the second network is ISO.
8. The communications system of claims 1 to 6 in which the protocol of the first network is ISO and the protocol of the second network is TCP/IP.

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9. The communications system of any above claims in which the selection means comprises means for avoiding the use of any interface from which it is not receiving values.
10. The communications system of any above claim in which the interface provides conversion between the first and second protocols.
11. The communications system of any above claim in which the means for sending values to a node of a network is arranged to send the values by means of the protocol for that network.
12. The communications system of any above claim in which the protocols comprise a transport layer and a network layer in which the transport layer comprises means for controlling the values sent.
13. The communications system of any above claim in which the protocols comprise routing metrics in which the system comprises means for sending the values via the routing metrics.
14. A method for the communication of data between a first node in a first network and a second node in a second network, in which data is communicated in the first network according to a first protocol and data is communicated in the second network according to a second protocol; in which the method includes the step of providing a plurality of

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communication interfaces for providing communication between the first node and the second node;

in which the method also includes the step of sending values from each interface to the first node indicating the availability of communication between that interface and the second node;

in which the method also includes the step of selecting one of the interfaces for communicating data between the first and second nodes, in which the selection is based on the values sent by the interfaces to the first node including the steps of detecting the selection of the selected interface and modifying the value sent by the selected interface to the first node including the step of preferentially selecting the interface sending the modified value.

15. The method of any one of claim 14 in which the protocols comprise a transport layer and a network layer including the step of controlling the values sent using the transport layer.

16. The method of any one of claims 14 to 15 in which the protocols comprise routing metrics including the step of sending the values using the routing metrics.

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